FIG.1

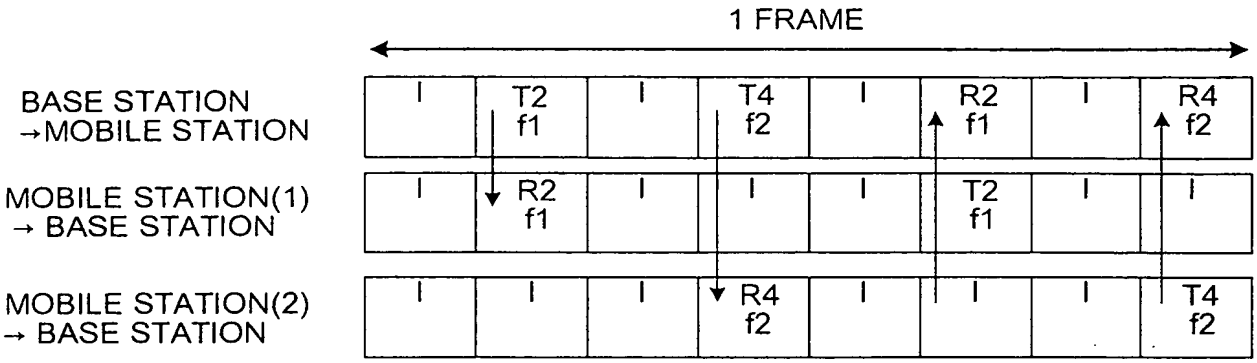

1 FRAME
BASE STATION
→MOBILE STATION
MOBILE STATION(1)
→ BASE STATION
MOBILE STATION(2)
→ BASE STATION
T2
f1
T4
f2
R2
f1
R4
f2
R2
f1
T2
f1
R4
f2
T4
f2

FIG.2

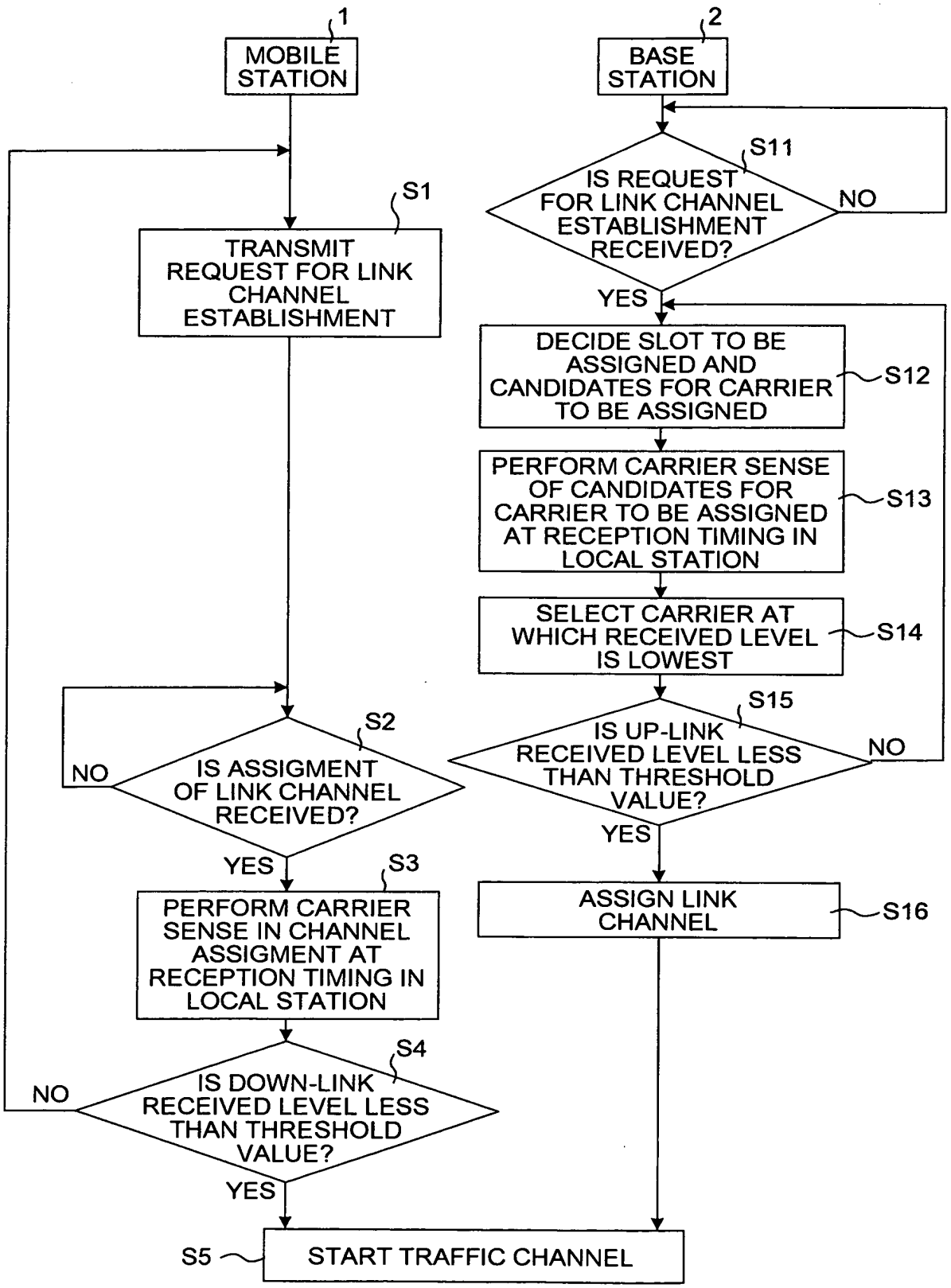

1
MOBILE STATION
2
BASE STATION
S1
TRANSMIT REQUEST FOR LINK CHANNEL ESTABLISHMENT
S11
IS REQUEST FOR LINK CHANNEL ESTABLISHMENT RECEIVED?
NO
YES
DECIDE SLOT TO BE ASSIGNED AND CANDIDATES FOR CARRIER TO BE ASSIGNED
S12
PERFORM CARRIER SENSE OF CANDIDATES FOR CARRIER TO BE ASSIGNED AT RECEPTION TIMING IN LOCAL STATION
S13
SELECT CARRIER AT WHICH RECEIVED LEVEL IS LOWEST
S14
S2
IS ASSIGMENT OF LINK CHANNEL RECEIVED?
NO
YES
S15
IS UP-LINK RECEIVED LEVEL LESS THAN THRESHOLD VALUE?
NO
YES
S3
PERFORM CARRIER SENSE IN CHANNEL ASSIGMENT AT RECEPTION TIMING IN LOCAL STATION
ASSIGN LINK CHANNEL
S16
S4
IS DOWN-LINK RECEIVED LEVEL LESS THAN THRESHOLD VALUE?
NO
YES
S5
START TRAFFIC CHANNEL

FIG.3

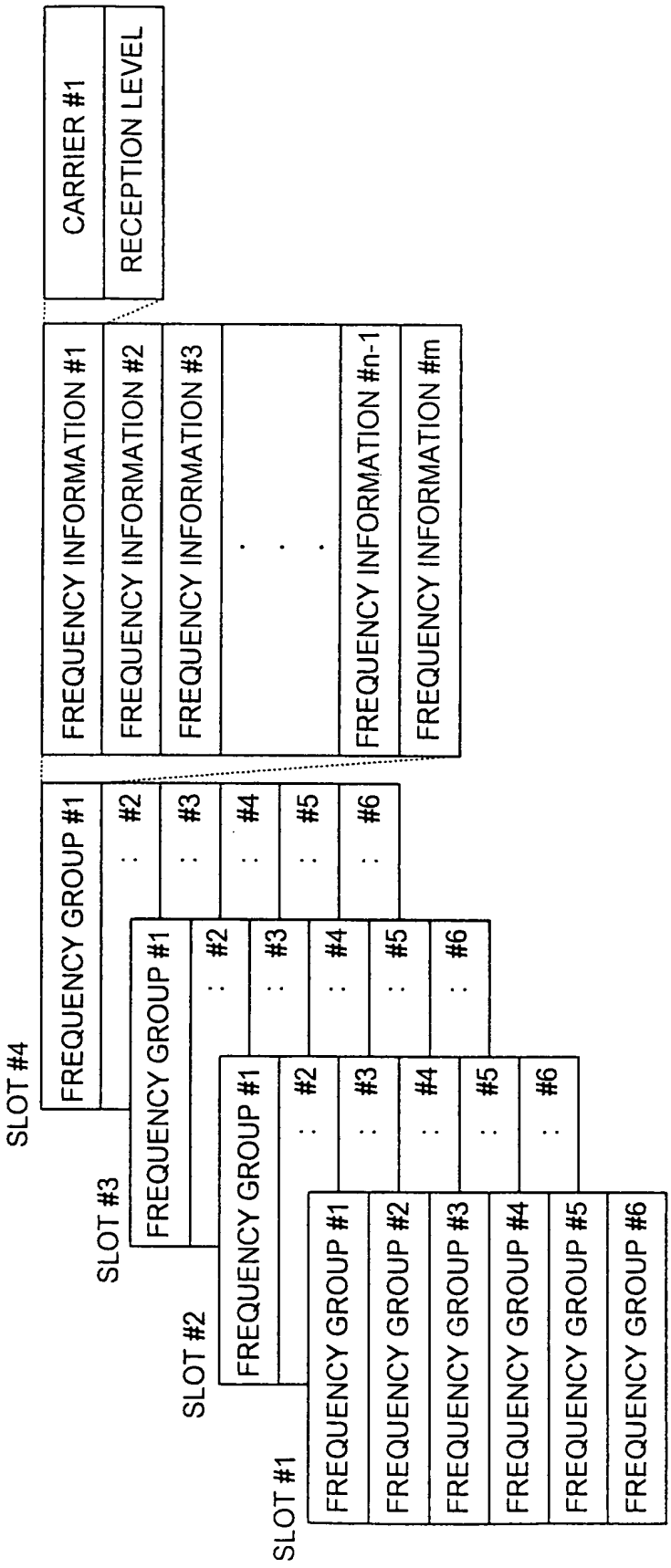

CARRIER #1
RECEPTION LEVEL
FREQUENCY INFORMATION #1
FREQUENCY INFORMATION #2
FREQUENCY INFORMATION #3
FREQUENCY INFORMATION #n-1
FREQUENCY INFORMATION #m
SLOT #4
FREQUENCY GROUP #1
: #2
: #3
: #4
: #5
: #6
SLOT #3
FREQUENCY GROUP #1
: #2
: #3
: #4
: #5
: #6
SLOT #2
FREQUENCY GROUP #1
: #2
: #3
: #4
: #5
: #6
SLOT #1
FREQUENCY GROUP #1
FREQUENCY GROUP #2
FREQUENCY GROUP #3
FREQUENCY GROUP #4
FREQUENCY GROUP #5
FREQUENCY GROUP #6

FIG.4

FREQUENCY GROUP NUMBER	FREQUENCY AS MANAGEMENT TARGET											
#1	1	7	13	19	25	31	37	43	49	55	61	67
#2	2	8	14	20	26	32	38	44	50	56	62	68
#3	3	9	15	21	27	33	39	45	51	57	63	69
#4	4	10	16	22	28	34	40	46	52	58	64	70
#5	5	11	17	23	29	35	41	47	53	59	65	71
#6	6	12	18	24	30	36	42	48	54	60	66	72

FIG.5

CS-ID [5:3]	PRIORITY OF FREQUENCY GROUP NUMBER					
000	#1	#2	#3	#4	#5	#6
001	#2	#3	#4	#5	#6	#1
010, 110	#3	#4	#5	#6	#1	#2
011	#4	#5	#6	#1	#2	#3
100, 111	#5	#6	#1	#2	#3	#4
101	#6	#1	#2	#3	#4	#5

FIG.6

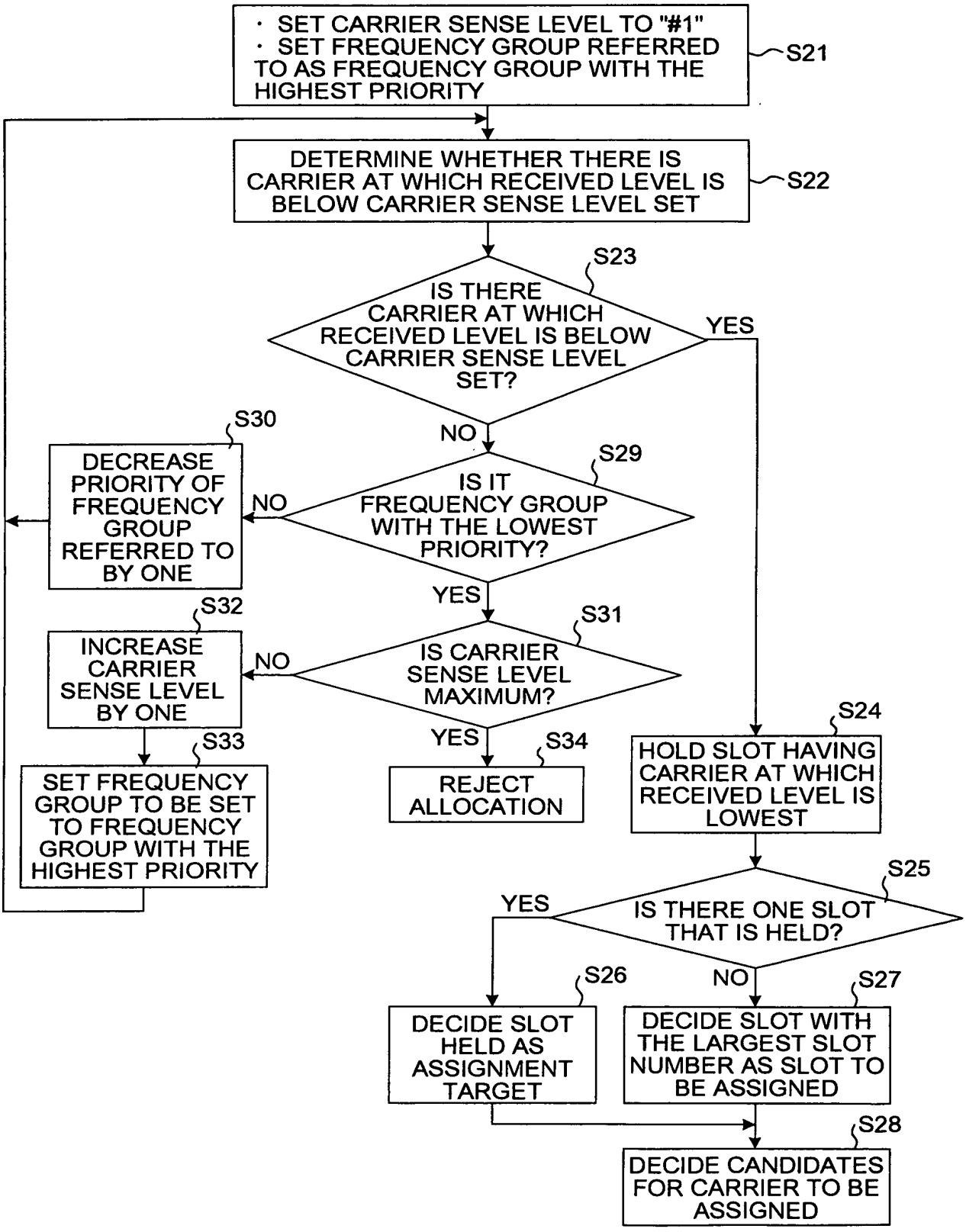

· SET CARRIER SENSE LEVEL TO "#1"
· SET FREQUENCY GROUP REFERRED TO AS FREQUENCY GROUP WITH THE HIGHEST PRIORITY
S21
DETERMINE WHETHER THERE IS CARRIER AT WHICH RECEIVED LEVEL IS BELOW CARRIER SENSE LEVEL SET
S22
S23
IS THERE CARRIER AT WHICH RECEIVED LEVEL IS BELOW CARRIER SENSE LEVEL SET?
YES
NO
S29
IS IT FREQUENCY GROUP WITH THE LOWEST PRIORITY?
NO
S30
DECREASE PRIORITY OF FREQUENCY GROUP REFERRED TO BY ONE
YES
S31
IS CARRIER SENSE LEVEL MAXIMUM?
NO
S32
INCREASE CARRIER SENSE LEVEL BY ONE
YES
S34
REJECT ALLOCATION
S33
SET FREQUENCY GROUP TO BE SET TO FREQUENCY GROUP WITH THE HIGHEST PRIORITY
S24
HOLD SLOT HAVING CARRIER AT WHICH RECEIVED LEVEL IS LOWEST
S25
IS THERE ONE SLOT THAT IS HELD?
YES
NO
S26
DECIDE SLOT HELD AS ASSIGNMENT TARGET
S27
DECIDE SLOT WITH THE LARGEST SLOT NUMBER AS SLOT TO BE ASSIGNED
S28
DECIDE CANDIDATES FOR CARRIER TO BE ASSIGNED

FIG.7

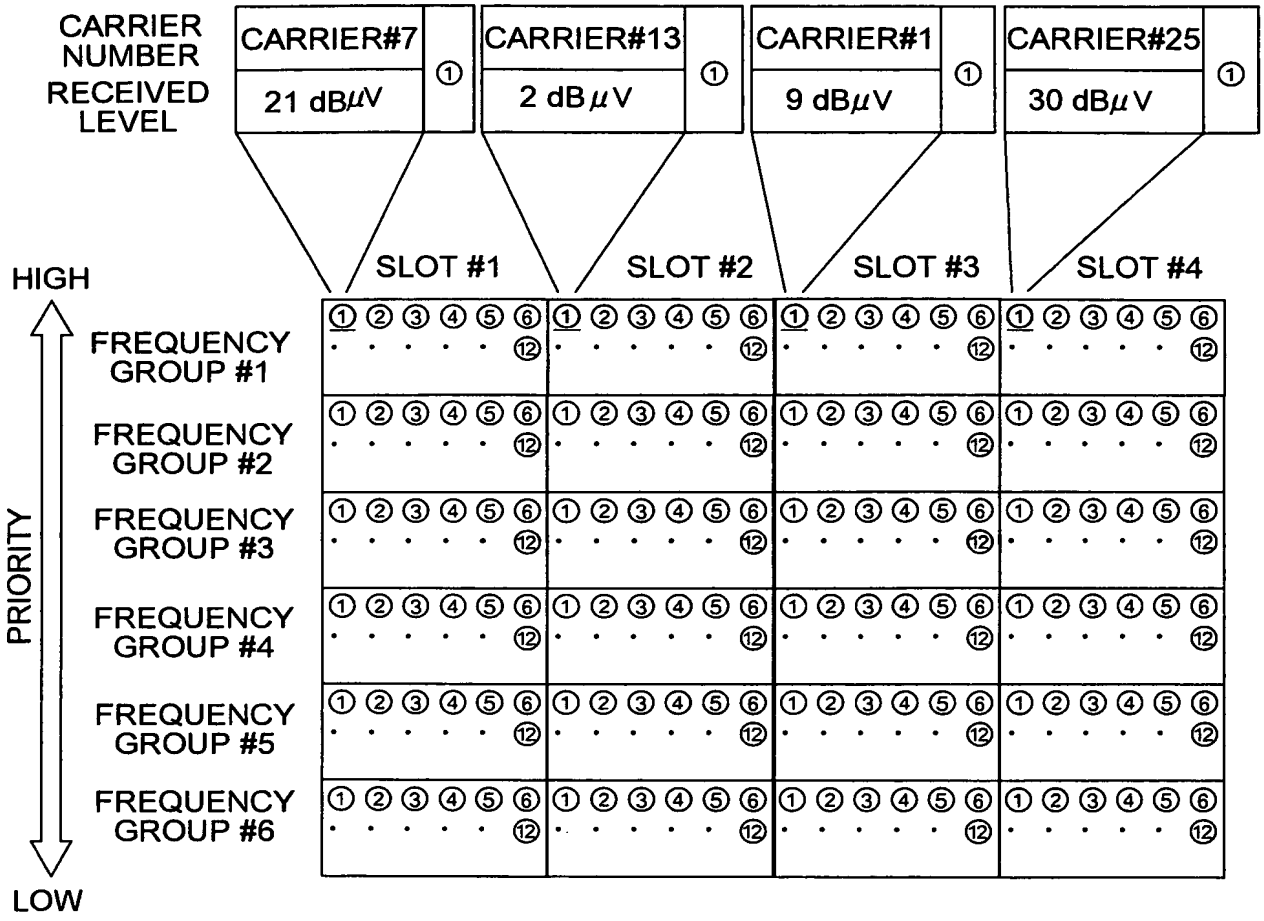


FIG.8

CARRIER SENSE LEVEL NUMBER	CARRIER SENSE LEVEL VALUE
#1	10 dBμV
#2	15 dBμV
#3	20 dBμV
#4	25 dBμV
#5	35 dBμV

FIG.9

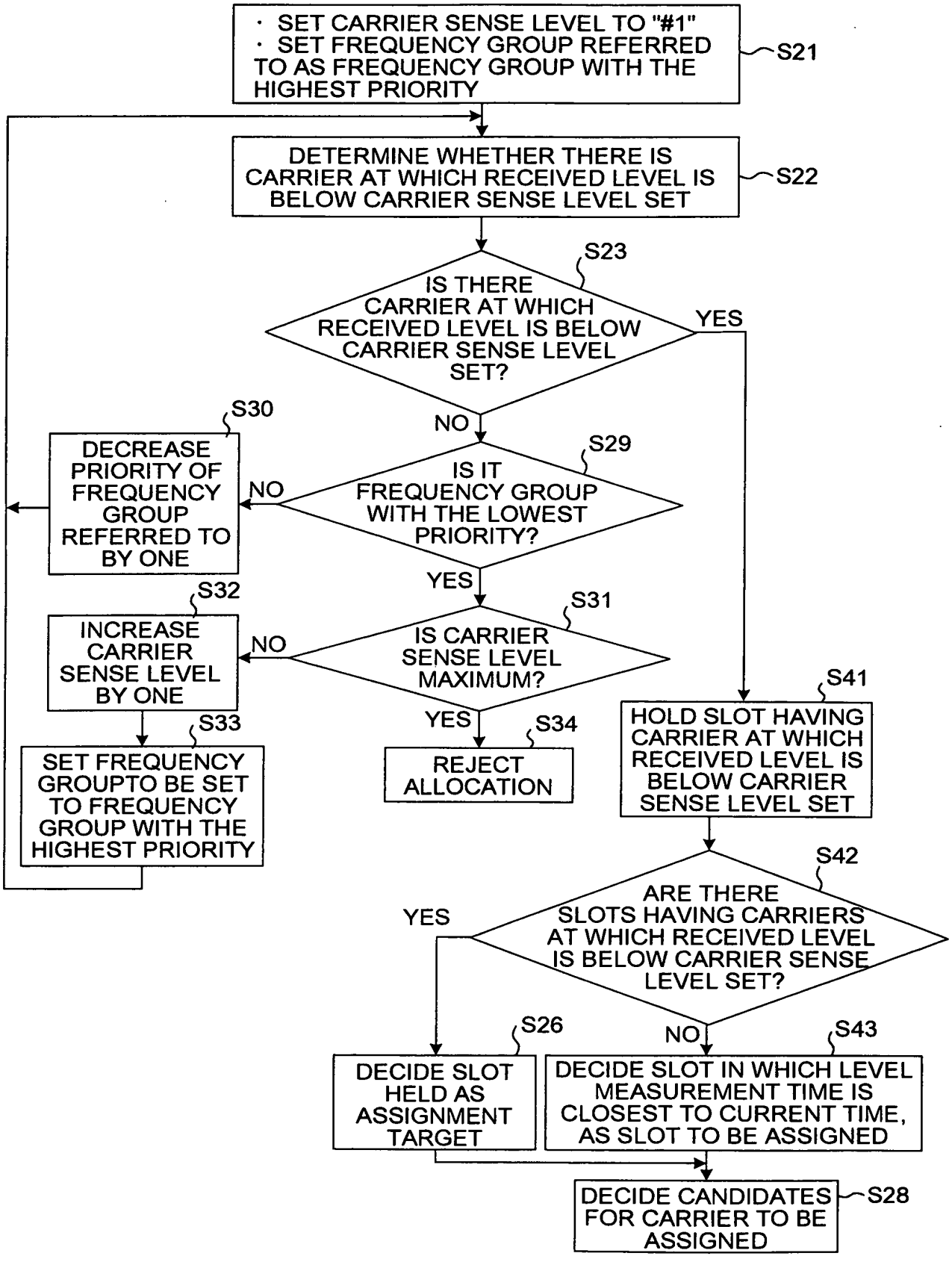

· SET CARRIER SENSE LEVEL TO "#1"
· SET FREQUENCY GROUP REFERRED TO AS FREQUENCY GROUP WITH THE HIGHEST PRIORITY
S21
DETERMINE WHETHER THERE IS CARRIER AT WHICH RECEIVED LEVEL IS BELOW CARRIER SENSE LEVEL SET
S22
S23
IS THERE CARRIER AT WHICH RECEIVED LEVEL IS BELOW CARRIER SENSE LEVEL SET?
YES
NO
S29
IS IT FREQUENCY GROUP WITH THE LOWEST PRIORITY?
NO
S30
DECREASE PRIORITY OF FREQUENCY GROUP REFERRED TO BY ONE
YES
S31
IS CARRIER SENSE LEVEL MAXIMUM?
NO
S32
INCREASE CARRIER SENSE LEVEL BY ONE
YES
S34
REJECT ALLOCATION
S33
SET FREQUENCY GROUPTO BE SET TO FREQUENCY GROUP WITH THE HIGHEST PRIORITY
S41
HOLD SLOT HAVING CARRIER AT WHICH RECEIVED LEVEL IS BELOW CARRIER SENSE LEVEL SET
S42
ARE THERE SLOTS HAVING CARRIERS AT WHICH RECEIVED LEVEL IS BELOW CARRIER SENSE LEVEL SET?
YES
NO
S26
DECIDE SLOT HELD AS ASSIGNMENT TARGET
S43
DECIDE SLOT IN WHICH LEVEL MEASUREMENT TIME IS CLOSEST TO CURRENT TIME, AS SLOT TO BE ASSIGNED
DECIDE CANDIDATES FOR CARRIER TO BE ASSIGNED
S28

FIG.10

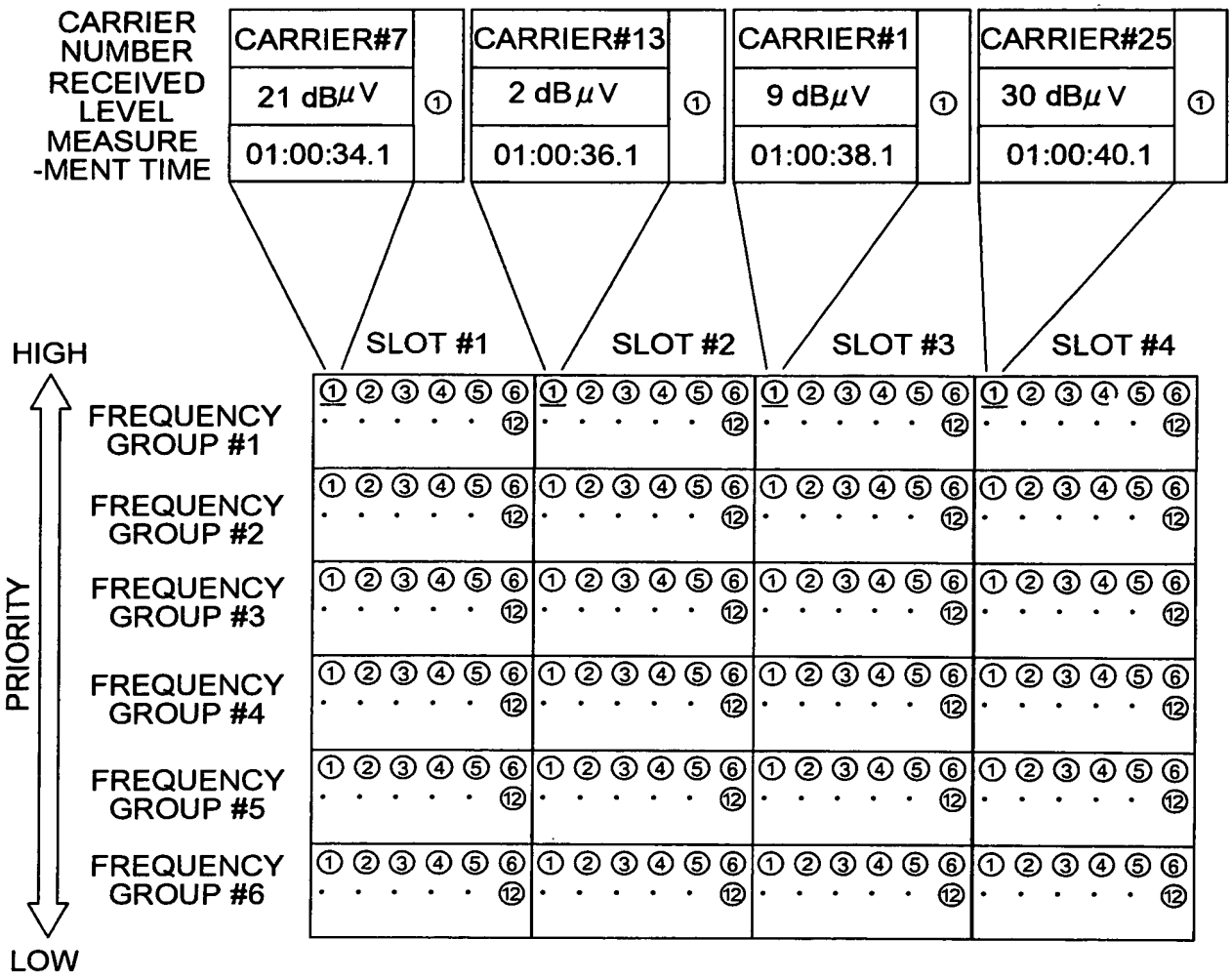

CARRIER NUMBER
RECEIVED LEVEL MEASURE -MENT TIME
CARRIER#7
21 dBμV
01:00:34.1
CARRIER#13
2 dBμV
01:00:36.1
CARRIER#1
9 dBμV
01:00:38.1
CARRIER#25
30 dBμV
01:00:40.1
SLOT #1
SLOT #2
SLOT #3
SLOT #4
HIGH
PRIORITY
LOW
FREQUENCY GROUP #1
FREQUENCY GROUP #2
FREQUENCY GROUP #3
FREQUENCY GROUP #4
FREQUENCY GROUP #5
FREQUENCY GROUP #6

FIG.11

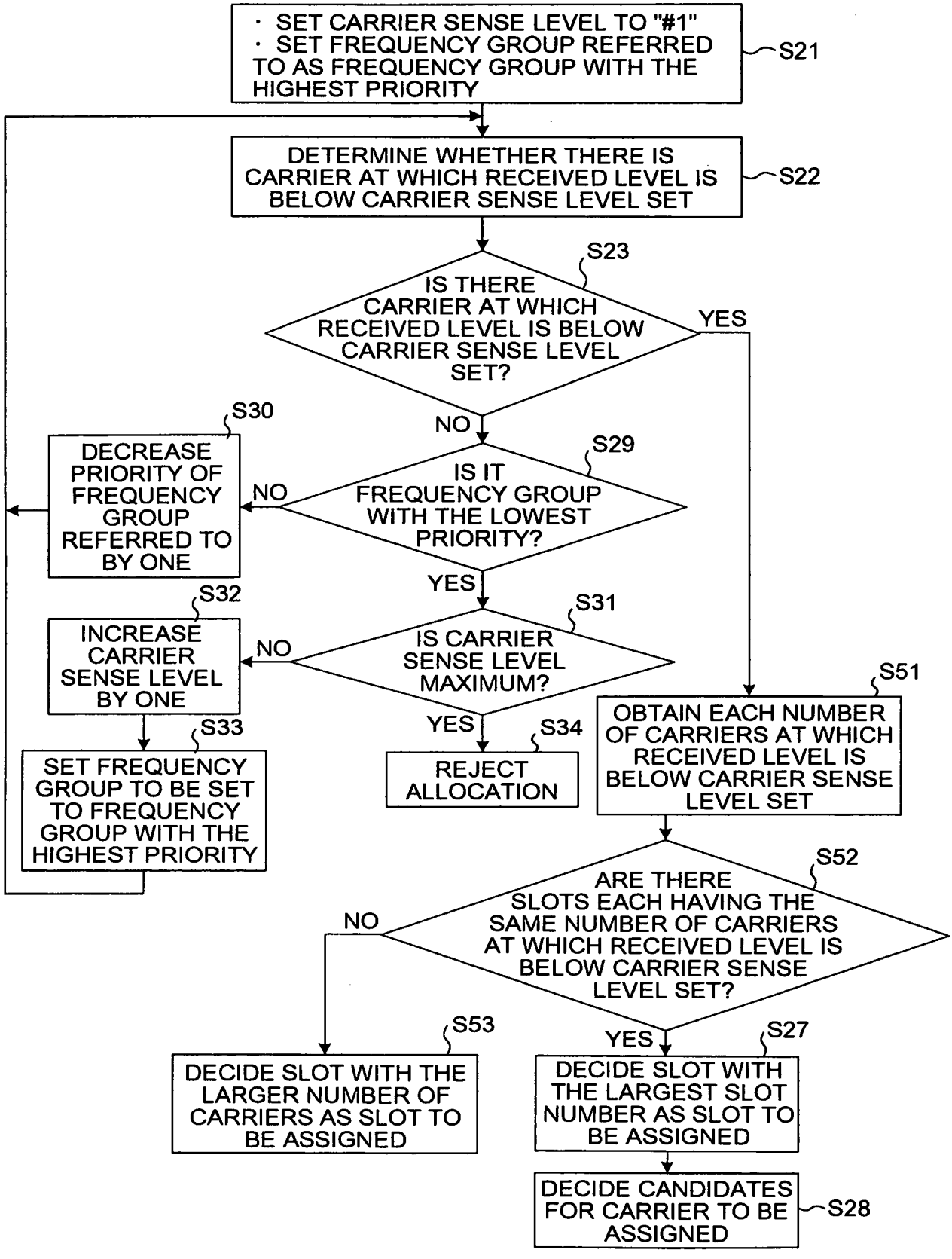

· SET CARRIER SENSE LEVEL TO "#1"
· SET FREQUENCY GROUP REFERRED TO AS FREQUENCY GROUP WITH THE HIGHEST PRIORITY
S21
DETERMINE WHETHER THERE IS CARRIER AT WHICH RECEIVED LEVEL IS BELOW CARRIER SENSE LEVEL SET
S22
S23
IS THERE CARRIER AT WHICH RECEIVED LEVEL IS BELOW CARRIER SENSE LEVEL SET?
YES
NO
S30
DECREASE PRIORITY OF FREQUENCY GROUP REFERRED TO BY ONE
NO
S29
IS IT FREQUENCY GROUP WITH THE LOWEST PRIORITY?
YES
S32
INCREASE CARRIER SENSE LEVEL BY ONE
NO
S31
IS CARRIER SENSE LEVEL MAXIMUM?
YES
S33
SET FREQUENCY GROUP TO BE SET TO FREQUENCY GROUP WITH THE HIGHEST PRIORITY
S34
REJECT ALLOCATION
S51
OBTAIN EACH NUMBER OF CARRIERS AT WHICH RECEIVED LEVEL IS BELOW CARRIER SENSE LEVEL SET
S52
ARE THERE SLOTS EACH HAVING THE SAME NUMBER OF CARRIERS AT WHICH RECEIVED LEVEL IS BELOW CARRIER SENSE LEVEL SET?
NO
YES
S53
DECIDE SLOT WITH THE LARGER NUMBER OF CARRIERS AS SLOT TO BE ASSIGNED
S27
DECIDE SLOT WITH THE LARGEST SLOT NUMBER AS SLOT TO BE ASSIGNED
DECIDE CANDIDATES FOR CARRIER TO BE ASSIGNED
S28

FIG.12

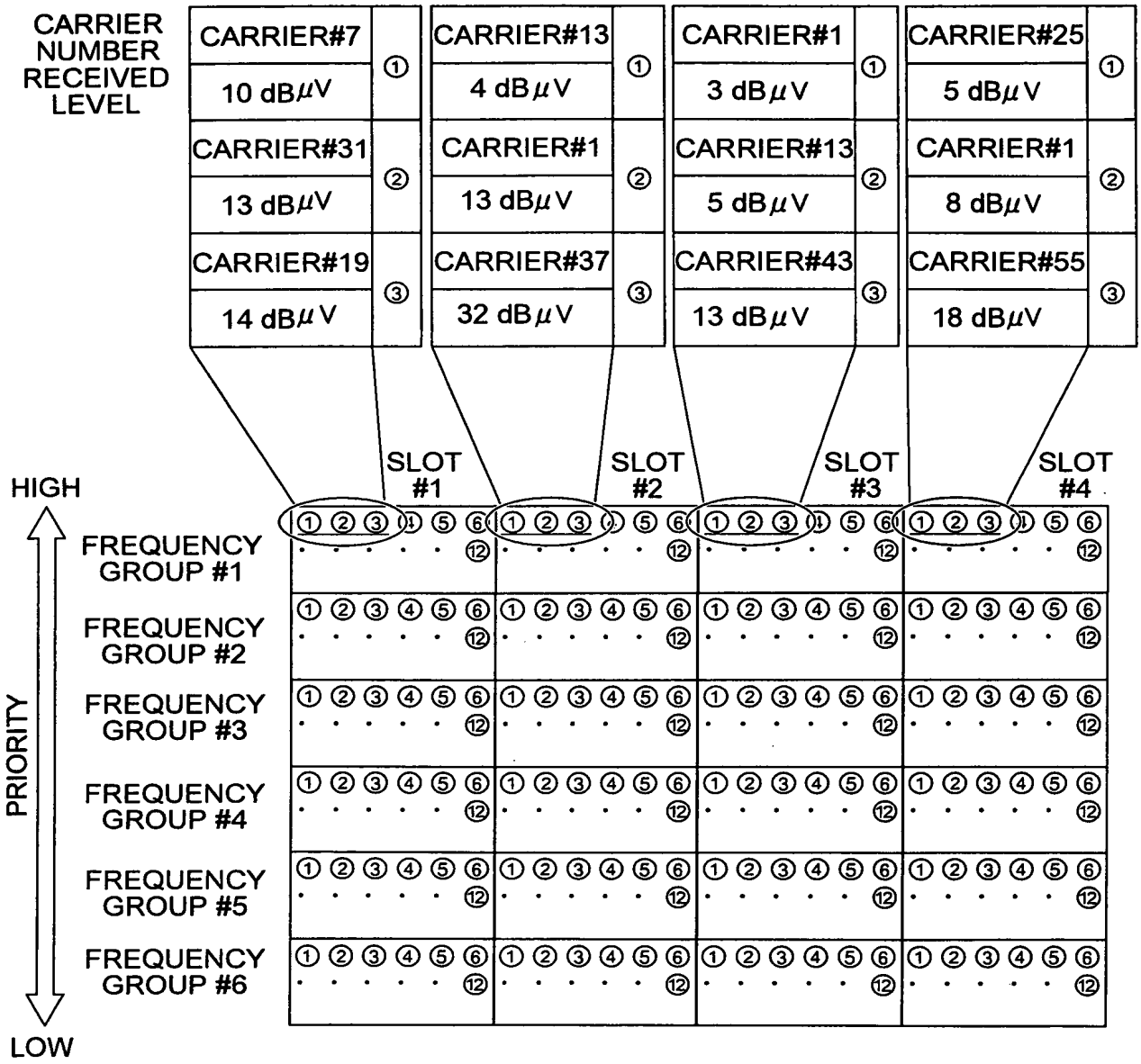

CARRIER NUMBER RECEIVED LEVEL
CARRIER#7
10 dBμV
①
CARRIER#31
13 dBμV
②
CARRIER#19
14 dBμV
③
CARRIER#13
4 dBμV
①
CARRIER#1
13 dBμV
②
CARRIER#37
32 dBμV
③
CARRIER#1
3 dBμV
①
CARRIER#13
5 dBμV
②
CARRIER#43
13 dBμV
③
CARRIER#25
5 dBμV
①
CARRIER#1
8 dBμV
②
CARRIER#55
18 dBμV
③
SLOT #1
SLOT #2
SLOT #3
SLOT #4
HIGH
PRIORITY
LOW
FREQUENCY GROUP #1
FREQUENCY GROUP #2
FREQUENCY GROUP #3
FREQUENCY GROUP #4
FREQUENCY GROUP #5
FREQUENCY GROUP #6

FIG.13

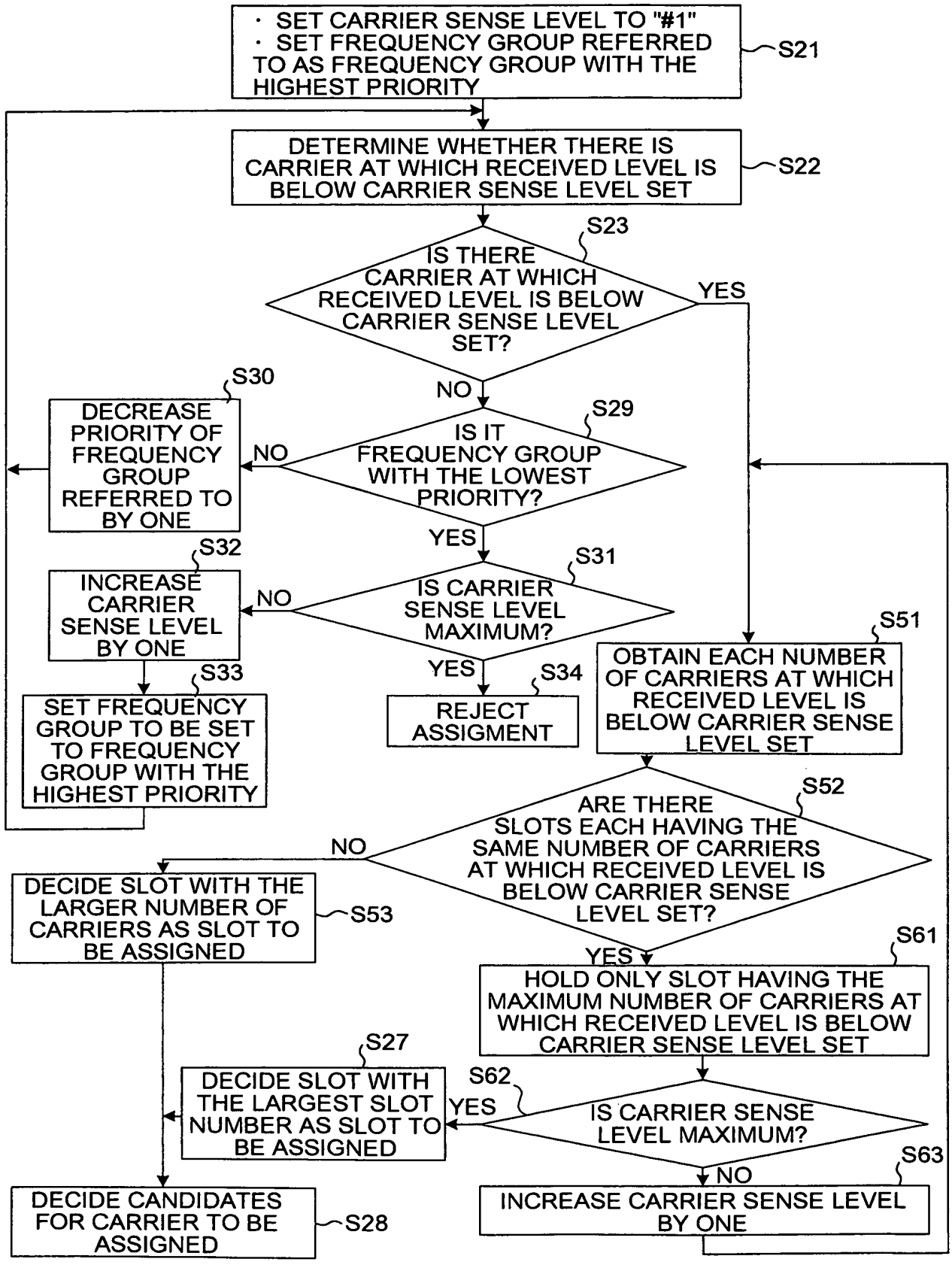

· SET CARRIER SENSE LEVEL TO "#1"
· SET FREQUENCY GROUP REFERRED TO AS FREQUENCY GROUP WITH THE HIGHEST PRIORITY
S21
DETERMINE WHETHER THERE IS CARRIER AT WHICH RECEIVED LEVEL IS BELOW CARRIER SENSE LEVEL SET
S22
S23
IS THERE CARRIER AT WHICH RECEIVED LEVEL IS BELOW CARRIER SENSE LEVEL SET?
YES
NO
S30
DECREASE PRIORITY OF FREQUENCY GROUP REFERRED TO BY ONE
NO
S29
IS IT FREQUENCY GROUP WITH THE LOWEST PRIORITY?
YES
S32
INCREASE CARRIER SENSE LEVEL BY ONE
NO
S31
IS CARRIER SENSE LEVEL MAXIMUM?
YES
S33
SET FREQUENCY GROUP TO BE SET TO FREQUENCY GROUP WITH THE HIGHEST PRIORITY
S34
REJECT ASSIGMENT
S51
OBTAIN EACH NUMBER OF CARRIERS AT WHICH RECEIVED LEVEL IS BELOW CARRIER SENSE LEVEL SET
S52
ARE THERE SLOTS EACH HAVING THE SAME NUMBER OF CARRIERS AT WHICH RECEIVED LEVEL IS BELOW CARRIER SENSE LEVEL SET?
NO
DECIDE SLOT WITH THE LARGER NUMBER OF CARRIERS AS SLOT TO BE ASSIGNED
S53
YES
S61
HOLD ONLY SLOT HAVING THE MAXIMUM NUMBER OF CARRIERS AT WHICH RECEIVED LEVEL IS BELOW CARRIER SENSE LEVEL SET
S27
DECIDE SLOT WITH THE LARGEST SLOT NUMBER AS SLOT TO BE ASSIGNED
S62
YES
IS CARRIER SENSE LEVEL MAXIMUM?
NO
S63
INCREASE CARRIER SENSE LEVEL BY ONE
DECIDE CANDIDATES FOR CARRIER TO BE ASSIGNED
S28

FIG.14

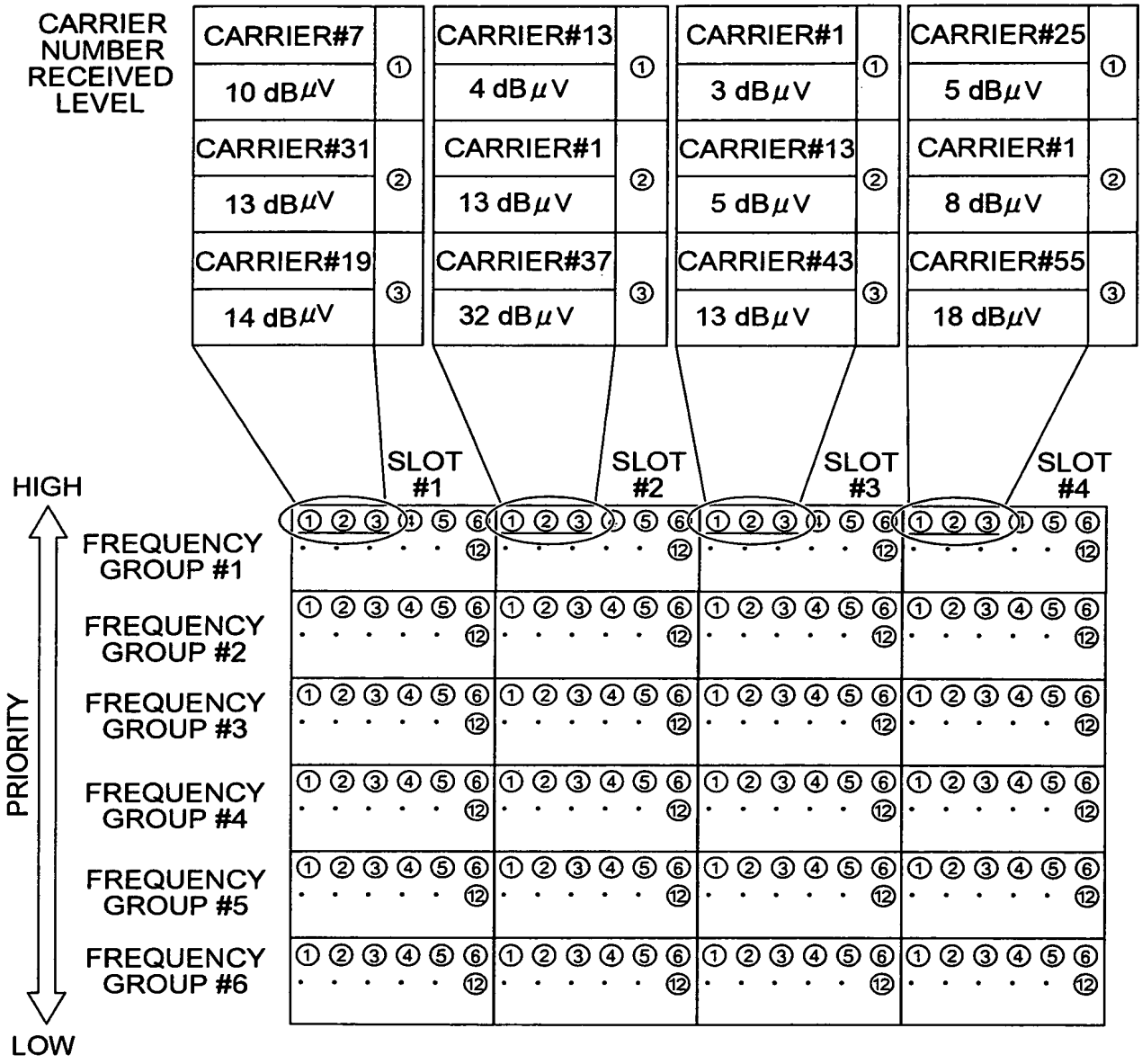

CARRIER NUMBER RECEIVED LEVEL
CARRIER#7
10 dBμV
CARRIER#31
13 dBμV
CARRIER#19
14 dBμV
CARRIER#13
4 dBμV
CARRIER#1
13 dBμV
CARRIER#37
32 dBμV
CARRIER#1
3 dBμV
CARRIER#13
5 dBμV
CARRIER#43
13 dBμV
CARRIER#25
5 dBμV
CARRIER#1
8 dBμV
CARRIER#55
18 dBμV
①
②
③
SLOT #1
SLOT #2
SLOT #3
SLOT #4
HIGH
PRIORITY
LOW
FREQUENCY GROUP #1
FREQUENCY GROUP #2
FREQUENCY GROUP #3
FREQUENCY GROUP #4
FREQUENCY GROUP #5
FREQUENCY GROUP #6

FIG.15

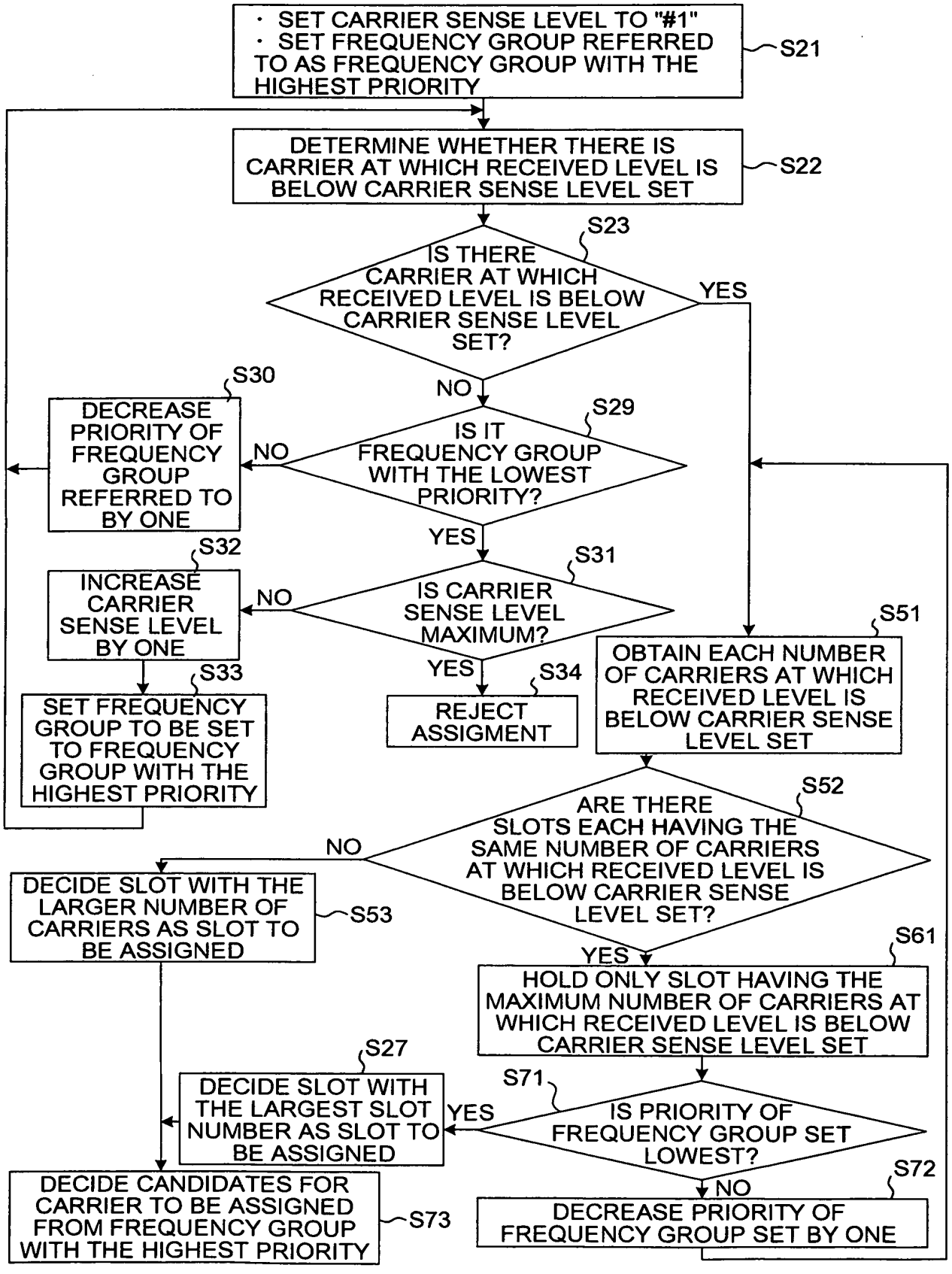

· SET CARRIER SENSE LEVEL TO "#1"
· SET FREQUENCY GROUP REFERRED TO AS FREQUENCY GROUP WITH THE HIGHEST PRIORITY
S21
DETERMINE WHETHER THERE IS CARRIER AT WHICH RECEIVED LEVEL IS BELOW CARRIER SENSE LEVEL SET
S22
S23
IS THERE CARRIER AT WHICH RECEIVED LEVEL IS BELOW CARRIER SENSE LEVEL SET?
YES
NO
S30
DECREASE PRIORITY OF FREQUENCY GROUP REFERRED TO BY ONE
NO
S29
IS IT FREQUENCY GROUP WITH THE LOWEST PRIORITY?
YES
S32
INCREASE CARRIER SENSE LEVEL BY ONE
NO
S31
IS CARRIER SENSE LEVEL MAXIMUM?
YES
S33
SET FREQUENCY GROUP TO BE SET TO FREQUENCY GROUP WITH THE HIGHEST PRIORITY
S34
REJECT ASSIGMENT
S51
OBTAIN EACH NUMBER OF CARRIERS AT WHICH RECEIVED LEVEL IS BELOW CARRIER SENSE LEVEL SET
S52
ARE THERE SLOTS EACH HAVING THE SAME NUMBER OF CARRIERS AT WHICH RECEIVED LEVEL IS BELOW CARRIER SENSE LEVEL SET?
NO
DECIDE SLOT WITH THE LARGER NUMBER OF CARRIERS AS SLOT TO BE ASSIGNED
S53
YES
S61
HOLD ONLY SLOT HAVING THE MAXIMUM NUMBER OF CARRIERS AT WHICH RECEIVED LEVEL IS BELOW CARRIER SENSE LEVEL SET
S71
IS PRIORITY OF FREQUENCY GROUP SET LOWEST?
YES
S27
DECIDE SLOT WITH THE LARGEST SLOT NUMBER AS SLOT TO BE ASSIGNED
NO
S72
DECREASE PRIORITY OF FREQUENCY GROUP SET BY ONE
DECIDE CANDIDATES FOR CARRIER TO BE ASSIGNED FROM FREQUENCY GROUP WITH THE HIGHEST PRIORITY
S73

FIG.16

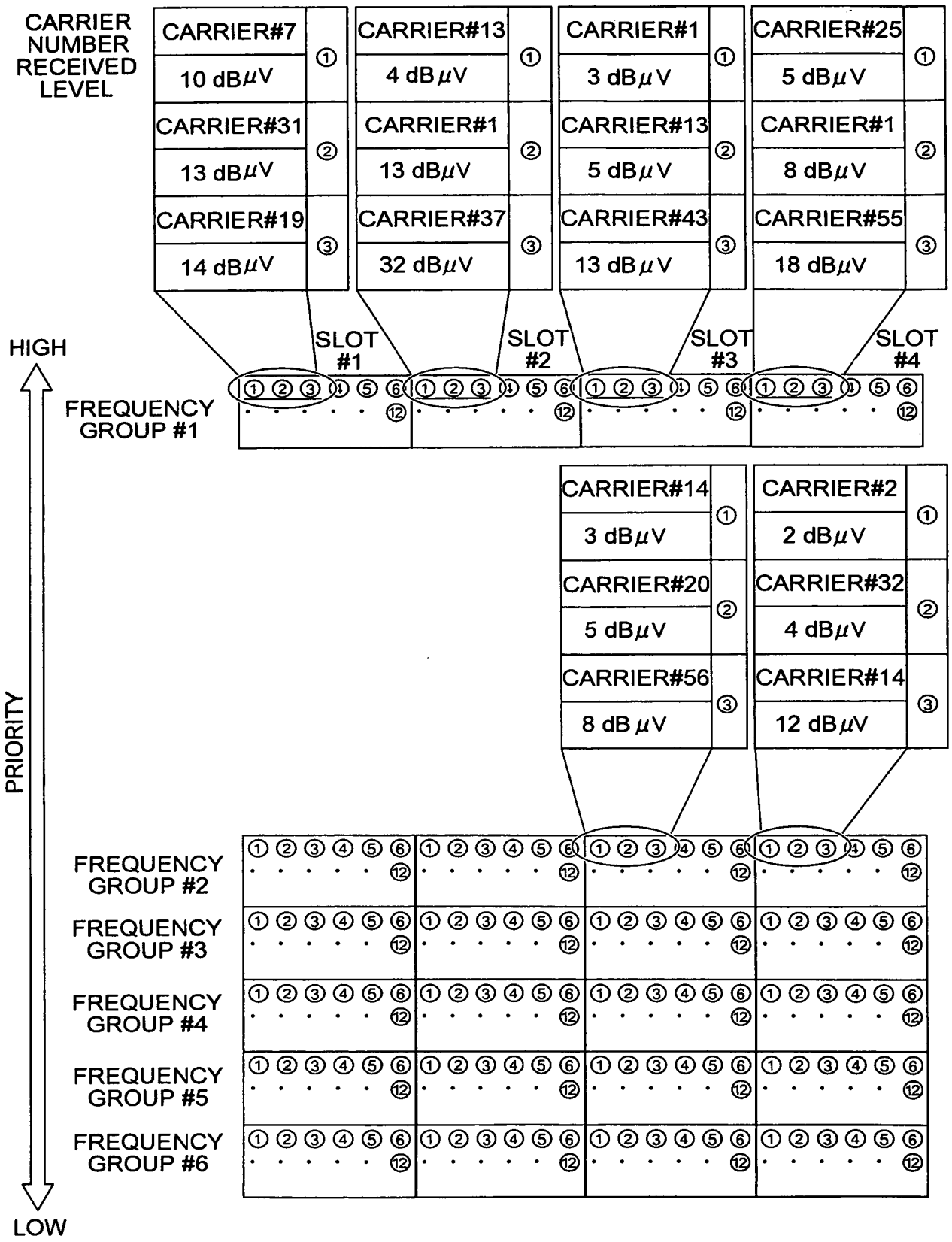
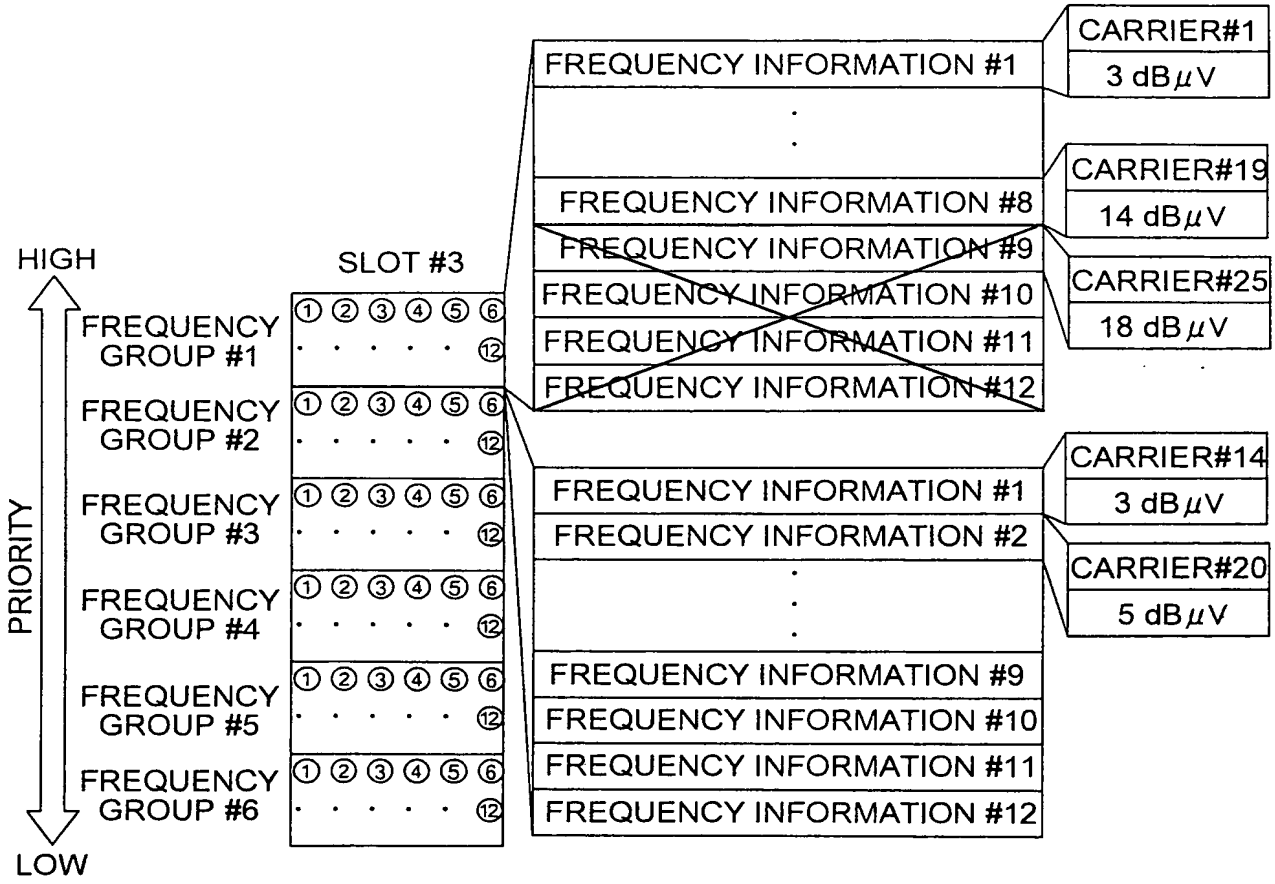

CARRIER NUMBER RECEIVED LEVEL
CARRIER#7
10 dBμV
CARRIER#31
13 dBμV
CARRIER#19
14 dBμV
CARRIER#13
4 dBμV
CARRIER#1
13 dBμV
CARRIER#37
32 dBμV
CARRIER#1
3 dBμV
CARRIER#13
5 dBμV
CARRIER#43
13 dBμV
CARRIER#25
5 dBμV
CARRIER#1
8 dBμV
CARRIER#55
18 dBμV
SLOT #1
SLOT #2
SLOT #3
SLOT #4
HIGH
PRIORITY
LOW
FREQUENCY GROUP #1
CARRIER#14
3 dBμV
CARRIER#20
5 dBμV
CARRIER#56
8 dBμV
CARRIER#2
2 dBμV
CARRIER#32
4 dBμV
CARRIER#14
12 dBμV
FREQUENCY GROUP #2
FREQUENCY GROUP #3
FREQUENCY GROUP #4
FREQUENCY GROUP #5
FREQUENCY GROUP #6

FIG.17


HIGH
PRIORITY
LOW
SLOT #3
FREQUENCY GROUP #1
FREQUENCY GROUP #2
FREQUENCY GROUP #3
FREQUENCY GROUP #4
FREQUENCY GROUP #5
FREQUENCY GROUP #6
① ② ③ ④ ⑤ ⑥ ⑫
FREQUENCY INFORMATION #1
FREQUENCY INFORMATION #8
FREQUENCY INFORMATION #9
FREQUENCY INFORMATION #10
FREQUENCY INFORMATION #11
FREQUENCY INFORMATION #12
FREQUENCY INFORMATION #1
FREQUENCY INFORMATION #2
FREQUENCY INFORMATION #9
FREQUENCY INFORMATION #10
FREQUENCY INFORMATION #11
FREQUENCY INFORMATION #12
CARRIER#1
3 dBμV
CARRIER#19
14 dBμV
CARRIER#25
18 dBμV
CARRIER#14
3 dBμV
CARRIER#20
5 dBμV